

**AMENDMENT TO THE SPECIFICATION:**

On page 3, please amend the third paragraph on line 13 with the following amended paragraph:

A MAP decoder uses the BCJR algorithm - see ~~C. Beerou, A. Glavieux, and P. Thitimajshima, "Near Shannon Limit Error Correcting Coding: Turbo Codes." In Proc. IEEE Int. Conf. Commun., Geneva, Switzerland, 1993, pp. 1064-1070~~ L. R. BAHL et al., "OPTIMAL DECODING OF LINEAR CODES FOR MINIMIZING SYMBOL ERROR RATE", IEEE Transactions on Information Theory, March 1974, pages 284-287 - to compute the soft outputs, or likelihood. Using the received signals  $x$ ,  $y$  and  $z$ , the algorithm computes three types of probabilities:  $\alpha$   $\beta$   $\lambda$ .